

**Amendment and Response**

Applicant: David C. Lowery et al.

Serial No.: 10/677,120

Filed: October 1, 2003

Docket No.: 10354US01

Title: MAGNETIC RECORDING TAPE MEDIA HAVING LOW ABRASIVITY AND RELIABLE MEDIA PERFORMANCE

---

**REMARKS**

The following remarks are made in response to the Non-Final Office Action mailed December 30, 2005. In that Office Action, the Examiner acknowledged Applicants' previous election of Group I (claims 1-10) and withdrew claims 11-15 from further consideration. Further, the Examiner rejected claims 1-10 under 35 U.S.C. §102(b) as being anticipated by, or in the alternative, under 35 U.S.C. §103(a) as being obvious over Mori et al., U.S. Patent No. 5,510,168 ("Mori").

With this Response, claims 11-15 have been cancelled and new claims 16-22 have been added. Claims 1-10 and 16-22 are pending in the application and are presented for reconsideration and allowance.

**35 U.S.C. §§102 & 103 Rejections**

Claims 1-10 were rejected under 35 U.S.C. §102(b) as being anticipated by or, in the alternative, under 35 U.S.C. §103(a) as being obvious over Mori. More specifically, the Examiner took the position that although Mori "does not disclose the claimed abrasivity index of the recording medium. . . that the structure taught by Mori et al. inherently satisfies the claim limitations directed to abrasivity index by virtue of the fact that the reference discloses a structure that is substantially the same as claimed (i.e., magnetic metal particles containing Fe dispersed in a binder with an alumina head cleaning agent)" (Office Action, page 3). Alternatively, the Examiner asserted "that it would have been obvious to one of ordinary skill in the art to determine the optimal value of the abrasivity index of the magnetic layer taught by Mori et al." (*Id.*). The Applicants respectfully submit that the Abrasivity Index recited in independent claim 1 is neither inherent nor obvious in view of Mori.

In particular, although Mori recites a magnetic recording medium including a non-magnetic support and a magnetic recording component layer (Abstract, col. 9, lines 19-21), Mori fails to inherently satisfy the claim limitations of claim 1. Rather, to rely on inherency there must be "a basis of fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the prior art (See *Ex parte* Levy, 17 USPQ2d 1461, 1464 (Bd. Pat.

**Amendment and Response**

Applicant: David C. Lowery et al.

Serial No.: 10/677,120

Filed: October 1, 2003

Docket No.: 10354US01

Title: MAGNETIC RECORDING TAPE MEDIA HAVING LOW ABRASIVITY AND RELIABLE MEDIA PERFORMANCE

---

App. & Inter. 1990); *In re Robertson*, 1969 F.3d 743, 745, 49 USPQ2d 1949, 1950-1951 (Fed. Cir. 1999); MPEP §2112 IV). The similarities between the claimed magnetic recording medium and the magnetic recording medium of Mori does not necessarily result in Mori inherently disclosing a magnetic coating characterized by Abrasivity Index of not greater than 350 microinches. Even assuming that Mori and the claimed invention utilize the exact same materials, the resultant tape may have an Abrasivity Index either within or outside of the range recited in claim 1 due the sensitivity of magnetic recording media to the details of manufacture (*see e.g.* page 2, lines 20-25; page 14, lines 5-11; page 10, lines 221-28; and page 14, lines 3-29 of the current application). With this in mind, magnetic recording media formed of similar materials often have very different properties.

The above-described sensitivity to manufacturing details is illustrated in the "EXAMPLES" section beginning on page 15, line 23 of the current application. More specifically, Comparative Example 1 "was prepared utilizing the same upper and lower layer formulations" as in Example 1; however, Comparative Example 1 was subjected to different burnishing conditions during manufacturing (page 18, lines 21-28). Upon testing, Example 1 was shown to have an Abrasivity Index of 330 microinches, which is significantly lower than the Abrasivity Index of 1310 microinches exhibited by Comparative Example 2 (page 19, Table 1). Accordingly, a comparison of Example 1 to Comparative Example 2 supports the Applicants' position that prior art magnetic recording media, even if formed with similar materials, do not necessarily or inherently possess characteristics of the claimed invention, namely, an Abrasivity Index of not greater than 350 microinches.

Since as described above and in view of the above-described examples, there is no basis of fact and/or technical reasoning to support a determination that the allegedly inherent characteristic claimed by the Applicants (i.e., an Abrasivity Index of not greater than 350 microinches) necessarily flows from the teachings of the prior art, the magnetic recording media of claim 1 is not inherent to the disclosure of Mori. Consequently, the

**Amendment and Response**

Applicant: David C. Lowery et al.

Serial No.: 10/677,120

Filed: October 1, 2003

Docket No.: 10354US01

Title: MAGNETIC RECORDING TAPE MEDIA HAVING LOW ABRASIVITY AND RELIABLE MEDIA PERFORMANCE

---

Applicants respectfully request that the rejection of claim 1 under 35 U.S.C. §102(b) as being anticipated by Mori be withdrawn.

In addition, a magnetic recording medium having the Abrasivity Index recited by claim 1 is not obvious over the teachings of Mori. As similarly described above, the mere reference in Mori to a non-magnetic substrate and a magnetic layer formed over the substrate does not necessarily result in a magnetic recording medium having the particular properties of claim 1. That is to say, manufacturing and processing can result in magnetic recording media that are either inside or outside of the properties ranges recited in claim 1. The mere inference that a product can be modified does not render the resultant combination obvious unless the prior art suggest the desirability of such modification (*In re Mills*, 916 F.2d 680, 12 USPQ2d 1430 (Fed. Cir. 1990); MPEP 2143.01 III). Further, bare reference to the level of skill in the art cannot be relied upon to provide the requisite suggestion to modify a reference (MPEP §2143.01 IV). Accordingly, for similar reasons as described above with respect to inherency, the limitations of claim 1 are not believed to be obvious over Mori since Mori fails to recognize the desirability to form the magnetic recording medium to have the Abrasivity Index recited in claim 1.

More specifically, although Mori recites a magnetic recording medium including a non-magnetic support and a magnetic recording component layer (Abstract, col. 9, lines 19-21) and may include abrasive materials (col. 8, lines 53-60), the only reference in Mori to abrasiveness generally notes that abrasive materials can be included (col. 8, lines 53-60) and no reference is provided as to why, in what amount, or with what processing techniques the abrasive materials are added. Since Mori does not suggest any level of abrasivity or suggest why abrasivity is of any importance, Mori fails to provide any suggestion that it would be desirable to optimize abrasivity or to provide any guidance as to what an "optimized" level of abrasivity would entail. Rather, any discussion of considerations taken into account to optimize the Abrasivity Index of a magnetic recording medium is presented in the current application, which is

**Amendment and Response**

Applicant: David C. Lowery et al.

Serial No.: 10/677,120

Filed: October 1, 2003

Docket No.: 10354US01

Title: MAGNETIC RECORDING TAPE MEDIA HAVING LOW ABRASIVITY AND RELIABLE MEDIA PERFORMANCE

---

impermissible hindsight and is not a valid source of motivation to modify Mori to provide the Abrasivity Index recited in claim 1.

Following the above reasoning, Mori fails to recognize the Abrasivity Index of the magnetic recording medium as being a result-effective variable which achieves a recognized result. Since as described above Mori does not describe the Abrasivity Index as being of importance, nevertheless as being a result-effective variable, Mori fails to provide a reason to optimize the Abrasivity Index at all and the claimed Abrasivity Index values cannot be characterized as being the result of routine experimentation (*In re Antonie*, 559 F.2d 618, 195 USPQ 6 (CCPA 1977); MPEP 2144.05 IIB).

Furthermore, even if Mori were "optimized" according to principles in the prior art as stated in the current application, such optimization conventionally included starting with a magnetic recording medium having a high abrasivity level and lowering the level through experimentation until erosion of the read/write head falls within acceptable limits to approximate an upper limit abrasivity level (page 3, lines 20-27). Such tapes were not typically altered to lower the abrasivity below this level and, as such, were not altered to fall within the claimed Abrasivity Index range of claim 1. Only upon reading the current application would one of skill in the art realize and be motivated to modify existing magnetic recording mediums to more closely approximate a lower abrasivity limit (page 4, lines 1-6). Since use of the disclosure of the current application is an insufficient basis for modifying the prior art to embody the limitations of claim 1 and no other such motivation exists, the features of claim 1 are not believed to be obvious over Mori.

For at least these reasons, a magnetic recording tape having the claimed Abrasivity Index of not greater than 350 microinches is not taught or otherwise suggested by Mori. Therefore, claim 1 is believed to be allowable, and the Applicants respectfully request the rejection of claim 1 under 35 U.S.C. §103(a) over Mori be withdrawn.

**Amendment and Response**

Applicant: David C. Lowery et al.

Serial No.: 10/677,120

Filed: October 1, 2003

Docket No.: 10354US01

Title: MAGNETIC RECORDING TAPE MEDIA HAVING LOW ABRASIVITY AND RELIABLE MEDIA PERFORMANCE

---

Dependent claims 2-10 each depend from independent claim 1, which as described above is believed to be allowable. Accordingly, each of dependent claims 2-10 are also believed to be allowable, and the Applicants respectfully request the withdrawal of the rejections of claim 2-10 under 35 U.S.C. §§102(b) and 103(a).

In addition, the Applicants respectfully disagree with the Examiner's position that recitations of a DLT tape are merely recitations of intended use (Office Action, page 4). Rather, in order to be considered "a DLT tape," the magnetic recording medium must be manufactured within specific format guidelines. More specifically, recitation of "a DLT tape" signifies that the tape is formed in accordance with Digital Linear Tape Series technical formats as described by the ECMA and the ANSI (page 2, lines 12-18). In order to be considered a DLT tape, the magnetic recording media generally must conform to the standards set or it will not be able to be utilized with other DLT series equipment. For example, an LTO tape is formed with different characteristics than a DLT tape (*Id.*). As such, recitation of the magnetic recording medium being "a DLT tape" requires the magnetic recording medium to be formed with particular technical characteristics and is not merely a recitation of intended use. Therefore, since Mori fails to describe a DLT tape, claims 8 and 9 provide additional patentably distinct subject matter further supporting their allowability.

**New Claims**

With this Amendment, new claims 16-22 have been added to recite features that are supported by the originally-filed specification. Therefore, no new matter has been added. Each of claims 16-22 depend from independent claim 1, which, as described above, is believed to be allowable. Accordingly, new claims 16-22 are also believed to be allowable.

**CONCLUSION**

In view of the above, Applicants respectfully submit that pending claims 1-10 and 16-22 are in form for allowance and are not taught or suggested by the cited references.

**Amendment and Response**

Applicant: David C. Lowery et al.

Serial No.: 10/677,120

Filed: October 1, 2003

Docket No.: 10354US01

Title: MAGNETIC RECORDING TAPE MEDIA HAVING LOW ABRASIVITY AND RELIABLE MEDIA PERFORMANCE

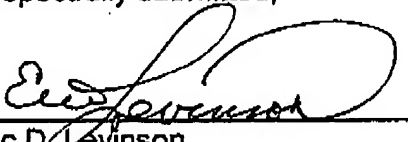
---

Therefore, reconsideration and withdrawal of the rejections and allowance of claims 1-10 and 16-22 are respectfully requested.

No fees are required under 37 C.F.R. 1.16(b)(c). However, if such fees are required, the Patent Office is hereby authorized to charge Deposit Account No. 09-0069.

The Examiner is invited to contact the Applicants' representative at the below-listed telephone number to facilitate prosecution of this application.

Respectfully submitted,

Date: 3/24/6  
Eric D. Levinson  
Reg. No. 35,814

Imation Corp. Legal Affairs  
P.O. Box 64898  
St. Paul, Minnesota 55164-0898  
Telephone: 651/704-3604  
Facsimile: 651/704-5951